



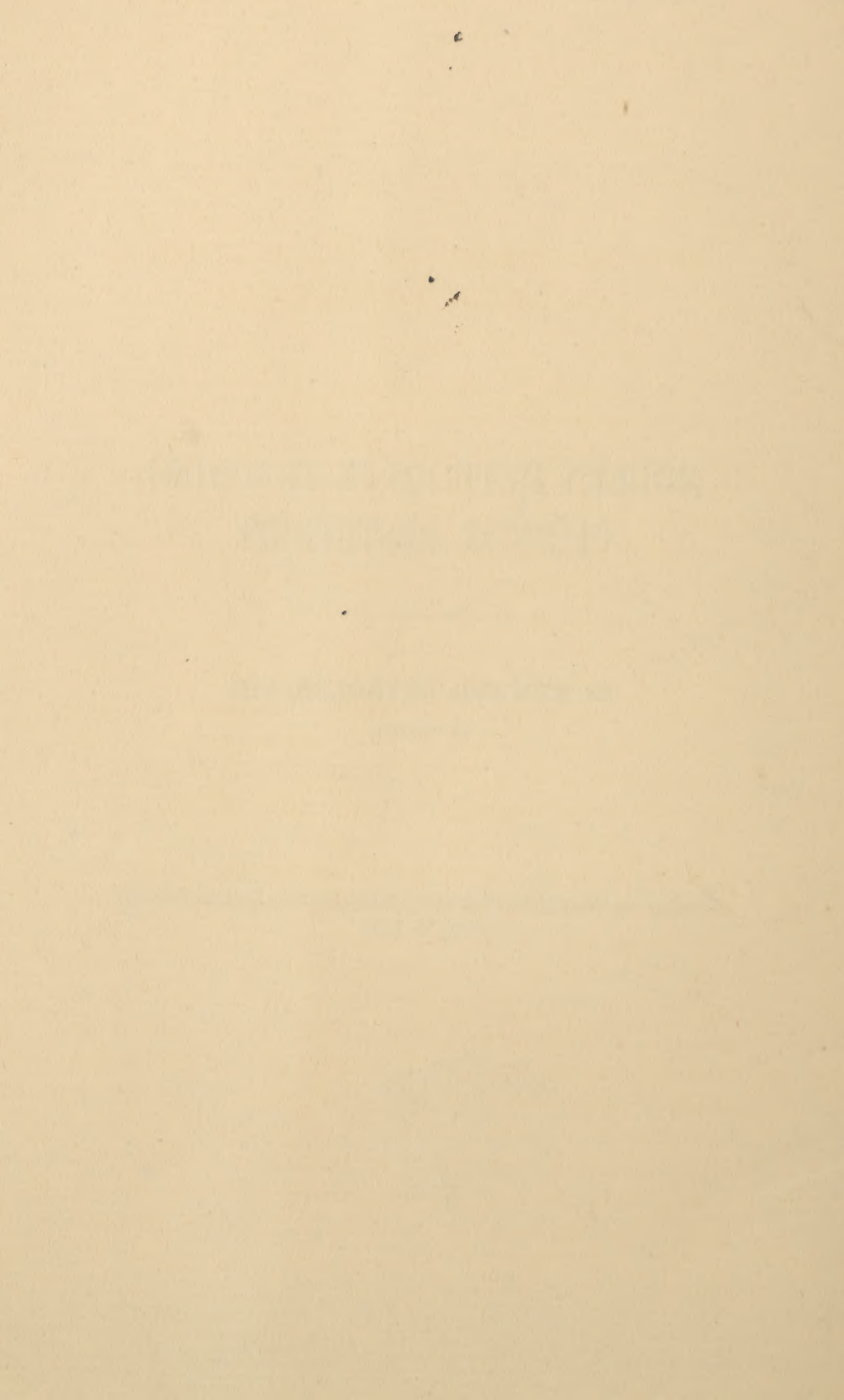
Reynolds (E.)

MODERN METHODS IN TEACHING
CLINICAL OBSTETRICS.

By EDWARD REYNOLDS, M.D.
OF BOSTON.

Read at the Annual Meeting of the Massachusetts Medical Society,
June 12, 1889.





MODERN METHODS IN TEACHING CLINICAL OBSTETRICS.

IN consideration of the great advances which have been made during the last few years, in the methods of instruction in clinical obstetrics in Harvard University, it has been thought that a brief account of the system now in use might be of interest to the general profession, especially in view of the marked decrease in the death-rate which has followed its adoption, as evidenced by the results of the work done by the students during a calendar year.

The material at our disposal is that furnished by the out-patient department of the Boston Lying-in Hospital and the obstetric department of the Boston Dispensary, and the increase in these clinics during the last few years has been so great that, in spite of the increased size of the class, we are able to-day to supply to each student an amount of clinical material which was unthought of a few years ago.

It may be mentioned in passing that the clinic has grown from about 250 cases in 1886 to more than 500 in 1888, and almost 300 in the six months of 1889 which have already elapsed, all of which cases are confined under the observation of the students, who have also the privilege of assisting at the many and often difficult operative deliveries which constantly occur. Remembering that our classes rarely exceed a total of 75 men, it will be observed that they attend upon an average about 7 cases a-piece,—one especially enthusiastic man in this year's class having delivered 22 women during the year. In addition to this, a recent enlargement of the department has enabled us to give detailed clinical



instruction to each student; and it is to this more careful superintendence of their work and to its more thorough systematization that we attribute the improvement in our results.

The mechanism by which the clinic is managed is as follows: the hospital has fitted up two rooms for the use of its out-patient department, one in the hospital building, and one at the South End of the city, and has kindly allowed the patients of the dispensary to be attended from these rooms on an equal footing with those under its own charge. Two students are constantly in residence at each of these rooms, and more are supplied if a press of cases makes it necessary.

These opportunities are so arranged that each student receives during his third year an appointment as externe to the hospital, the terms of service being so altered from time to time as to secure a substantial equality in the number of cases attended.

When a pregnant woman applies either to the hospital or to the dispensary for care during her confinement, as an out-patient, her name, address, and expected date of confinement are forwarded to Dr. C. M. Green, the Instructor in Obstetrics at the School, and she is assigned by him to the out-patient room nearest her residence. She is at once visited by the senior student then on duty, who takes her history, re-ascertains the probable date of confinement, directs her to send for him as soon as labor appears or sooner if any complication of pregnancy arises, and files her card in its place among the applications at the room. In most cases she is not seen again until she sends in labor. She is then at once visited by the senior student on duty at the time, who explains the absence of the man she had previously seen, and assumes the charge of the case.

Each student is required by the school to return to Dr. Green a full and carefully written report of at least 4 cases

which he has personally attended during labor and convalescence, and it is further required that he should have received personal instruction at the bedside of at least one of these cases from one of the Assistants in Obstetrics, namely, Dr. C. W. Townsend or the writer.

This clinical instruction is given whenever possible on the first case attended by the student, and is intended to include both the abdominal and vaginal examinations, at a time when labor is sufficiently advanced to allow a satisfactory diagnosis of position to be made from either. Whenever it is possible, the care of the perineum and the expression of the placenta are also demonstrated. To this is added a few words of clinical teaching illustrating any points of special interest in the individual case, and finally, the student is required to repeat the examination and is cross-questioned about it, in order to make sure that he understands the instruction which he has received. He is required to present his request for instruction upon a printed blank, which he is expected to fill out in full so far as the stage of labor permits, and he is always aware that the blanks are to be saved and their excellencies or faults commented upon before the class; his name of course being suppressed.

Though instances occur in which the student's diagnosis is found to be incorrect, they are surprisingly rare when we remember the inexperience of the men, and we are constantly surprised to see the care and intelligence which is manifested in the filling out of these blank requests.

The accuracy of their results from abdominal palpation is particularly gratifying, and we regard it as one of the most important advances which have been made in our teaching, that our students enter upon practice with so thorough an equipment in a method of diagnosis which has until lately been completely neglected by the profession at large. We find that the students are in general inclined to place nearly

as much reliance upon the abdominal as upon the vaginal examination, an impression which is I think shared by most men who have given the subject special attention, but which was hardly to have been expected *à priori* from inexperienced men. It is however in palpation especially that the gain which follows personal instruction is most plainly to be seen.

A student who has once had abdominal palpation demonstrated to him is much more likely to make a reliable diagnosis in this way in his later cases, than one who by some accident does not receive this instruction till toward the end of his series.

He is taught to examine the abdomen after the following manner: the physician should stand at the bed-side of the patient facing towards her feet as she lies upon her back. The hands are placed upon the abdomen, one on each side of the fundus, and pressed gently inward till the resistance of the uterine wall is felt. In a very fat or rigid abdomen, it may be impossible to perceive anything more than that a sense of greater resistance is found upon that side to which the solid back of the child is directed, but in most cases gentle movements of the hand up and down while pressed against the uterus in this way will detect the inequalities due to the foetal small parts upon one or the other side. The finger tips of each hand are next pressed deeply into the inguinal regions in search of the foetal head as it rests upon the superior strait, care being taken to make the motion by which this is done gradual, and devoid of sharp or jerky movement. With a well flexed head the greatest resistance should be found on the side to which the face is directed, and should therefore correspond to the side on which the foetal limbs were found. Any lack of such correspondence should awaken suspicion as to the correctness of one or the other observation, or if both are verified would suggest the presentation of a brow or extended head.

If the resistance of the head is not felt in the inguinal region, the upper extremity of the foetus should be carefully examined in order to exclude the possibility of a breech presentation, in which case the head is of course at the fundus and may be distinguished either by its separation from the trunk of the foetus by a sulcus which corresponds to the site of the neck, or by the fact that the head is more mobile upon the trunk than the breech.

The site of the foetal heart as found by auscultation furnishes a further guide in diagnosis, its greatest intensity being always heard over the foetal back, with the single exception of face presentations. The abdominal examination having been completed and a diagnosis made, the next duty is to confirm or revise that diagnosis by comparing it with the results of a vaginal examination. But before this is made the students are required to disinfect the hands after the following method: the hands are thoroughly washed with soap and water, carefully scrubbed with a nail brush in a solution of corrosive sublimate of a strength of 1 to 3500, and then anointed with eucalyptus vaseline, *i. e.*, a mixture of eucalyptus oil and vaseline in the proportion of a drachm to an ounce.

Then as the finger enters the vagina, the student is required to notice successively the width of the vulva and vagina, the condition of the rectum, and position of the coccyx, before determining the character and degree of dilatation of the os. This having been determined, he is to make his diagnosis of position from the fontanelles and sutures, remembering that the small fontanelle is to be recognized as the meeting place of three sutures, and that the position of the head is to be determined less by the position of that fontanelle in the pelvis than by following as many sutures as possible to their terminations, one of them ending in the great fontanelle, while each of the others is lost in the vicinity of an ear.

If both fontanelles are found, the position of the head is determined by the direction of the sagittal suture which connects them, while if only the ears are found a careful determination of the direction in which their flaps point, enables us to ascertain the direction in which the occiput must lie.

The height of the head in the pelvis is another point which should always be ascertained, and is found by passing the finger to that point at which the head is found to be in immediate contact with the pelvic wall, which point is necessarily situated at or about the greatest diameter of the foetal head. The pulp of the finger is then turned towards the pelvic wall, in order to determine at what part of that wall this diameter of the head is found.

The student is expected to have at least made the attempt to ascertain all these points before the arrival of his instructor, who then repeats the examination, demonstrates to him any defects in his observations, and encourages him to repeat them till he is certain of the facts.

His armament for the work consists of a bottle of corrosive sublimate in tablets, a box of eucalyptus vaseline, a nail brush, a Davidson's syringe, a long English webbing male catheter, and a stethoscope; to which are added bottles containing laudanum, fluid extract of ergot and a solution of chloral, together with any minor conveniences which he may think necessary. If an abundant or foul vaginal discharge is present, the vagina is thoroughly douched with the sublimate solution at the beginning of labor, but in clean cases no douche is given till after the delivery of the placenta, although every case receives a douche at that time. Under ordinary circumstances, that is if no suspicious symptoms appear, nothing more is attempted except a daily washing of the external genitals and the use of as clean napkins as are obtainable.

No difference is made as to antiseptic precautions between

operative and normal cases, except that after version, manual removal of a placenta, or any intrauterine operation, if from hurry or other cause there is any doubt about the thoroughness of the antiseptics used, an intrauterine injection of 1 to 4000 corrosive sublimate solution, followed by a few ounces of a weak carbolic solution, is sometimes used. This is however rare. This attempt at surgical cleanliness of everything which approaches the vulva, and the use of one, or at most two vaginal douches during labor, is all that is done in the way of antiseptics, since it is impossible for us to attempt any such complete antiseptics during convalescence, as is done within the wards of the hospital; but this simple and somewhat rough system has reduced the mortality from sepsis in our clinic, from a very high one in former years to .002 in 1887, and nothing in 1888.

The interest of the relation of our antiseptic system to our results seems to me so great, however, that a more complete consideration of its effect upon the results had perhaps best be deferred to the report of cases which is to follow.

The 447 cases confined in 1887 included a somewhat unusually large proportion of interesting deliveries, but as most of these have already been reported in detail, I have thought it best to restrict myself here to a merely statistical report of the year's work.

Of the 447 women, 446 were discharged well. One died, a case which will be spoken of later. 451 children were delivered, there being 4 cases of twins.

Of these, 7 were non-viable, *i. e.*, were born after less than 7 months gestation; 4 were born macerated; 12 or 2.6% were stillborn, unmacerated; 10 or 2.2% were born alive but died before discharge, while 418 or 95.2%¹ were discharged alive.

¹ Of those born viable and unmacerated. The probable cause of death, or of stillbirth, in each case, is shown in the table.

TABLE I.—STILL-BIRTHS.

Still-born, 12.

Craniotomy	2
Prolapsed Funis	2
Placenta Prævia	2
Premature	1
Hydrocephalus	1
Delay in extracting head after version (universally contracted, flat pelvis)	1
Delay in extracting head after a breech presentation	1
Delay in extracting body	1
Unknown	1
Total,	12

TABLE II.—FŒTAL DEATHS.

Deaths, 10.

Accident, 3d day	} Healthy children. {	1
Exposure to cold by family		1
Unknown (foul play?)		1
Premature (after 14 hours, 12 hours, and 45 minutes respectively)		3
Congenital Syphilis		1
Hæmatophilia		1
Icterus Neonatorum (marasmus)		1
Asthenia		1
Total,		10

The average length of labor was computed and gives about the usual result.

		Premature.	At term.	Length of labor at term reported in.	Average duration of labor.
Multiparæ,	326	13	313	288	11 hours, 8 min.
Primiparæ,	103	4	99	90	20 hours, 8 min.
		Total,	412	378	13 hours, 45 min.
Unknown,	18				
Total,	447				

The reported weights of the children shows, as usual, that the children of multiparæ were slightly heavier than those of primiparæ.

TABLE IV.—WEIGHT OF CHILDREN.

	Weight reported in.	Average weight.
Children of Multiparæ,	305	7 lb. 9 $\frac{3}{4}$.
“ “ Primiparæ,	96	7 lb. 6 $\frac{3}{4}$.

TABLE V.—SEX OF CHILDREN.

Males . . .	204
Females . . .	211
Unreported . .	36
	<hr/>
Total,	451

The nationality of the mothers is shown by

TABLE VI.

Birth place.		Birth place.	
Ireland,	101	Sweden and	
United States,	94	Norway,	10
Poland,	57	Italy and	
Russia,	50	Portugal,	10
Germany and			<hr/>
Austria,	37	Total,	401
Canada,	27	Scattering and	
England,	15	unknown,	46
			<hr/>
		Total,	447

The Poles, Russians, Germans and Austrians, almost without exception Jews, present few if any marks of distinction, and may perhaps fairly be classed together, num-

bering in all 140 cases, or 35% of the total number. The Irish make up about 25% of the whole; the natives of the United States and Canada about 30%; and it is hoped that in future years, and with a larger number of cases, an inquiry into the characteristics of labor and the frequency of contracted pelvis in the different nationalities may become possible.

TABLE VII.

Labor was Natural in	412 ¹
Operative in	35

The nature of the 35 operative cases is shown by—

TABLE VIII.

Extraction of Breech	8
Low Forceps	13
High Forceps	4
¹ Version	8
² Craniotomy	2

TABLE IX.—EXTRACTION OF BREECH.

Footling.	Weight, lbs. oz.	Prema- ture.	Pelvis.	Operator. ⁴	Child.	Remarks.
....	....	....	Normal.	H.	Well.	No progress for 3 hours.
Yes.	9-12	....	"	H.	Still.	Failing foetal heart. Delay with head.
....	8-12	....	"	S.	Well.	Extraction of extended arms.
....	8-0	....	"	H.	"	Inertia Uteri.
Yes.	5-3	....	"	R.	"	Foot at vulva, breech in iliac fossa (oblique presentation), no progress.
....	8-8	....	"	R.	"	Inertia Uteri.
Yes.	3-0	7 ms.	"	R.	Still.	Macerated foetus, rigid os.
....	3-0	7 ms.	"	R.	"	Macerated foetus, rigid os.

¹ Including natural deliveries of the breech in 6 cases, of which 4 were premature.

² Two preceded by an unsuccessful application of high forceps.

³ One preceded by an unsuccessful application of high forceps, and one preceded by an unsuccessful application of high forceps, followed by version, with perforation of the after-coming head.

⁴ H.=House-physician, B. L. H. S.=Student. R.=Reynolds.

SUMMARY.

	At term	. . . . .	6
	Premature	. . . . .	2
Children	{ Stillborn, macerated	. . . . .	2
	“ unmacerated	. . . . .	1
	{ Discharged well	. . . . .	5
Mothers	“ “	. . . . .	8

TABLE X.—LOW FORCEPS.

Nation- ality.	Dura- tion of labor. h. m.	Posi- tion.	Weight of Child. lbs. oz.	Opera- tor. ¹	Number of preg- nancy.	Remarks.
Polish.	~	O. D. P.	7-8	R.	1	Manual flexation of extended head. Forceps applied obliquely. Head rotated within them.
Irish.	84-40	“	9-4	T.	1	Prolonged 1st stage. Mother died on 6th day. Head rotated by pains, but delayed by rigid perinæum.
Russian.	25-00	O. L. A.	6-12	R.	1	Eclampsia, one mild convulsion. Extreme œdema of vulva. No urine for 4 hours before delivery, then by catheter dr. j., which contained abundant casts and 1% albumen. Good and rapid convalescence, without convulsions, under warm pack and pot. acet.
German.	17-40	“	10-0	R.	1	Long 2d stage. Fœtal heart 170. Maternal pulse rapid and rising.
“	36-00	“	6-0	T.	1	Inertia uteri.
“	16-00	“	8-8	R.	5	“ “
U. S.	11-00	O. D. P.	8-0	T.	1	Head already rotated, but delayed by perinæum.
German.	27-00	O. L. A.	7-0	R.	1	Rigid perinæum.
U. S.	140-00	“	6-0	R.	1	Absolute inertia for 2 hours. Head on perinæum at 8 mos.
“	20-00	“	5-0	R.	2	Long 1st stage at 7 mos. Head low, os two-thirds dilated. Rapid rise of pulse and temperature.
Irish.	54-35	“	8-4	R.	1	Rigid perinæum.
Russian.	20-10	“	9-0	H.	1	“ “
U. S.	37-30	“	6-0	H.	1	“ “

¹ R.=Reynolds. T.=Townsend. H.=House physician, B. L. H.

SUMMARY.

Primiparæ,	11	Mothers {	Discharged well	. . . . .	12
Multiparæ,	2		Died . . . . .	. . . . .	1
	—				—
Total,	13			Total,	13
		Children discharged well	. . . . .		13

Indications.

Extended head	.	.	.	1	
Eclampsia	.	.	.	1	
Rigid soft parts	.	.	.	8	Pelves all normal.
Inertia	.	.	.	3	
				—	
Total,				13	

TABLE XI.—HIGH FORCEPS.

Nation- ality.	Dura- tion of labor. h. m.	Position.	Weight of Child.	Operator. ¹	Number of pregnancy.	Pelvis.	Child.	Remarks.
Irish.	8-15	O. D. P.	5-0	R.	1	Normal.	Well.	Low attachment of placenta. Labor at 8 mos. Rather severe hæmorrhage. Head high. Os two-thirds dilated.
Polish.	29-55	O. D. P.	6-12	T.	1	{ Justo-minor. Spines $9\frac{1}{4}$ in. Crests $10\frac{1}{4}$ in. Ext. conj. $7\frac{1}{4}$ in. Diag. " $4\frac{1}{4}$ in. Symph. 1 in. True conj. $3\frac{3}{4}$ in.	Well.	Rising pulse and temperature.
English	12-05	Brow O. L. A.	8-6	G.	2		Well.	Head engaged. No progress for 3 hours.
Irish.	9-00	O. L. A.	9-0	R.	3	"	Still.	Fibroid in lower uterine segment, and tight constriction ring about neck. Manual flexation and version were tried but abandoned as impossible. Manual extension to a face (M. D. A.) was then done, and forceps were then applied successfully. On arrival—head engaged, funis prolapsed and pulseless, foetal heart beating. Child extracted rapidly, but was still.

¹ R.=Reynolds. T.=Townsend. G.=Green.

SUMMARY.

Indications.

Low attachment of placenta	1	Mothers discharged well	4
Justo-minor pelvis	1		
Brow-presentation	1	Children {	" " 3
Prolapsed funis	1		still-born . 1
Total,		4	Total, 4

TABLE XII.—VERSION.

Nationality.	Duration of labor. h. m.	Presentation and Position.	Weight of Child.	Operator. ¹	Number of pregnancy.	Pelvis.	Child.	Forceps.	Remarks.
Norwegian.	42-45	Head O. D. P.	6-12	G.	4	.....	Well.	.....	Delay.
U. States.	.....	.....	4-13	R.	3	Normal.	Born alive, but died after 14 hours (premature).	.....	Antepartum peritonitis at 7 months. Labor appeared spontaneously, but did not progress, and patient beginning to fail, the os was manually dilated, and child extracted.
Canadian.	3-10	Head O. D. P.	7-8	R.	2	"	Still.	.....	Placenta prævia partialis. On arrival—child dead, severe hemorrhage going on. Manual dilatation and slow extraction.
Irish.	10-15	Transverse Sc. L. P.	7-0	T.	4	"	"	.....	Presentation of hand and cord. On arrival—child dead. Waters escaped. Marked retraction of uterus.
"	14-25	Transverse Sc. L. P. Breech S. D. A.	7-0	R.	7	"	Well.	.....	Twins.—1st twin, transverse, waters gone. Cephalic version impossible, podalic easily accomplished. 2d twin, breech, immediate extraction.
Russian.	9-00	Head O. L. A.	10-0	R.	4	{ Simple flat Diag. conj. 4½ in. Symph. long. 4½ in. True conj. 3½ in. Universally contracted. ed. flat. Spines 9½ in. Crests 11 in. Excl. conj. 8 in. Diag. conj. 4½ in. Symph. low and erect. True conj. 3½ in. Normal.	"	Axis-traction failed.	Version rendered difficult by constriction ring. Extraction of head very difficult. Head movable above brow at time of operation.
Irish.	12-00	Head O. D. A.	8-0	R.	4		"	Axis-traction failed.	Slight constriction ring about neck. Head movable. Version difficult. Extraction very difficult. Delay with head. External measurements increased by great fatness of patient. Three previous normal labors, with living children.
U. States.	0-45	Head	5-4	R.	7		"	.....	Placenta prævia centralis. At 7 months profuse hemorrhage without pains. On arrival—patient (colored) collapsed and still flowing. Os undilated. Manual dilatation (40 min.), version and extraction (5 min.).

SUMMARY.—Indications: Contracted Pelvis, 2; Placenta Prævia, 2; Transverse Presentation, 2; Ante-partum Peritonitis, 1; Delay, 1. Total, 8. Mothers discharged well, 4. Children: discharged well, 3; stillborn (3 dead before operation), 4; died (premature), 1.

¹ G.=Green. R.=Reynolds. T.=Townsend.

TABLE XIII.—CRANIOTOMY.

Nationality.	Duration of labor. h. m.	Position.	Weight of Child.	Number of pregnancy.	Pelvis.	Forceps.	Version.	Operator. ¹	Remarks.
German.	20-00	O. D. A.	6-8	3	Universally contracted, flat. Spines 9½ in. Crests 10½ in. Ext. conj. 7 in. Diam. conj. 4 in. True conj. 3½ in.	Axis traction failed.	Performed.	R.	After failure of forceps Prof. Richardson was called in consultation, and did version on the chance of saving the child, but failed to extract the head, which was then perforated.
Russian.	54-45	O. D. A.	8-0	1	Justo-minor. Spines 9 in. Crests 10½ in. Ext. conj. 6½ in. Diam. conj. 4 in. Symph. 2 in. True conj. 3 in.	Axis traction (Breuss) failed.		R.	Not seen till late in labor. Dr. Green called in consultation. Caesarian section considered, but ruled out by exhaustion of uterus. Head free above brim. Forceps applied as routine measure. Extraction of perforated head occupied 2 hours. Extraction of body very difficult. Rapid recovery. (April, 1888, delivered of living child at 8 months by induction of labor and high forceps.)

¹ R.=Reynolds. R'n=Richardson.

SUMMARY.

<i>Indications.</i>	
Universally contracted flat pelvis	2
Mothers, discharged well	2

The especial interest of these cases lies, to me, in the low death-rate from all causes and the infrequency of septicaemia, when these are considered in connection with the conditions under which the women are confined, and with the degree of antiseptic precaution observed.

With one exception, all the conditions which were formerly thought to be conducive to the propagation of puerperal fever are present in a marked degree. The women are *not* congregated together in a Lying-in Hospital, but they are almost without exception filthy, ill nourished, and over worked. They are confined in rooms, the filth, squalor and utterly unsanitary condition of which often beggars description, and are attended for the most part by entirely inexperienced men; yet the proportion of even mild sepsis has been kept below one per cent., and the maternal death-rate from all causes has been below one fourth of one per cent., while the foetal death-rate was less than five per cent.; and this in connection with the fact that in former years, in the same clinic and under the same circumstances, the death-rate from septicaemia was extremely high.

We who are observing the clinic from day to day, can only say that in our opinion the antiseptic system employed, imperfect though it may be, is the only change in the conditions, and that it must be held responsible for the improvement which we see.

It is manifestly impossible under the conditions of our clinic to carry out in full the system of antiseptic irrigation and vulva pads advocated by Garrigues and Richardson, and now so generally adopted, at least by institutions and by those especially interested in obstetrics, but we have taken advantage of one of the principles laid down by these authorities, *i. e.*, that if the labor is antiseptically conducted and the passages are made thoroughly aseptic at the end of labor, the natural valve-like action of the vulva and the constant outflow of the lochia tend to ward off and drain

away the contagium, unless it be afterward artificially introduced by a meddlesome finger or instrument. Prof. Richardson further suggests that the common and indeed necessary habit of these women in rising to pass urine and fæces undoubtedly tends, in spite of its other disadvantages, to promote a frequent and thorough drainage of the vagina.

The value of even so imperfect a system is, I think, well shown by the results of any one of the last three years' work. The statistics of 1887 have been selected because they were already at hand, and not because that year was in any sense the best.¹

During that year we had four cases of septicæmia; but before proceeding to describe them, it may be proper to first define the sense in which this word "septicæmia" is used here; which is, that though every rise of temperature should clinically be considered sepsis until another sufficient cause is found for it, yet only those cases are reported as such in which the temperature was above 100° for several consecutive days, and in which a collection of one more such symptoms as marked uterine tenderness, delayed involution, scanty secretion of milk, foul lochia, or the so-called diphtheritic patches in the vagina, appeared synchronously with the temperature.

Under this definition we had but four cases of septicæmia during 1887, and in connection with a report of these cases it seems proper to speak briefly of our routine treatment of that condition.

When the report of a high temperature is brought to us, the patient is visited by the assistant on duty at the time, and if after the lapse of 24 to 48 hours the temperature is still high and no cause other than sepsis is discernible, a speculum examination is made, any diphtheritic patch that is found is dusted with iodoform, or if there is much uterine

¹ In 1888 there was no maternal death from any cause, and we have recently confined more than 800 cases consecutively, without a death.

tenderness or a foul cervical discharge, an intrauterine douche of a 1 to 1000 corrosive, followed by a few ounces of a 1 to 100 carbolic solution, is given, and an iodoform bougie is passed to the fundus; the remainder of the treatment consisting simply in the free use of alcoholic stimulants and of forced feeding so far as that is possible.

During 1887 the gray patches were found but three times and no intrauterine douche was given. The majority of cases in which sepsis is suspected always proving to be merely instances of vaginal decomposition of the lochia without infection of the endometrium, with very mild and often no constitutional symptoms, and promptly relieved by bi-daily vaginal douches of the bi-chloride. Such cases are not here included under the name of septicæmia.

In the first case to be reported the patient had a chill upon the fifth day, and for ten days thereafter had a variable temperature, which was never above 101° and from that fell gradually to normal. There were no gray patches, and no very marked uterine tenderness; the lochia were foul and scanty, and the milk diminished. The disease was of mild type, the prognosis was never thought to be serious, and both mother and child were discharged well at the end of three weeks. It was found that the student in charge had without authority directed an untrained person to give a bi-daily vaginal douche of 1 to 3000 corrosive, and that this had been done with an old and foul enema syringe.

In a second case I was myself present accidentally at the delivery, and superintended a most stringent use of the usual precautions by the attendant, only to find, at the conclusion of the labor, that an old woman who was present had substituted a basin of Cochituate water for the corrosive sublimate solution, at a moment when our backs were turned. The woman was dirty, the lying-in room was a close and foul-smelling tenement, and a rather severe septic cellulitis, with gray patches in the vagina, foul lochia, suppressed

milk, great prostration, and continued high temperature, was the result. The patient though very sick eventually recovered.

The third case was one in which an irregularly high temperature for five days, with slightly sour lochia, abundant milk, doubtful gray patches in the vagina, and marked inflammatory reaction about an old cellulitis, followed by good recovery, occurred in a case which had been managed by a midwife for some hours before it came into our hands.

The remaining case is put down as septicæmia for the sake of fairness, although no diagnosis was ever made. The woman was an elderly primipara, who after a lingering first stage of four days' duration was delivered by Dr. Townsend by low forceps under full antiseptic precautions. Her temperature was high from the time of delivery, and on the fourth day rose sharply to 105° , in coincidence with the appearance of a general erythema. Lochia scanty though sweet, milk scanty, no gray patches, no marked abdominal tenderness. Dr. Townsend was unable to make a diagnosis, but suspected an attack of one of the acute infectious erythemata; the patient then left the clinic, and died the next (the 6th) day under the charge of a regular practitioner who expresses himself as unable to make a diagnosis, or to exclude sepsis. It is included in our list as the only death from any cause, although technically discharged alive.

The lesson which these and other cases have taught us, and which I hope may be of interest to others, is that that field of practice to which it has been thought that the application of antiseptic methods was least practicable, namely, the poor practice of partially trained men working among unsanitary surroundings, is precisely the field in which, from the prevalence of septicæmia, the greatest saving of life and health is to be expected, and certainly I can but feel that if any man who has thought that the circumstances of his practice made it impossible for him to observe antisepsis will but try to take at

least as much care as our students do, he will agree with us that the feeling that he can go into any hovel amidst the congregated filth of a family of peasants, and in the stifling heat of a city tenement house in August, and do the most serious obstetrical operations with an almost complete certainty that his care has excluded the ever-prevalent risks of septicæmia from the list of dangers through which the patient must pass; and furthermore when he can go away from such a case believing that the patient having recovered well from her ether has nothing more to do than to gather her strength together for her convalescence, then he will agree with us that the attendant lightening of his anxieties is worth ten times the trifling trouble which his antisepsis has cost him.

Nor can any better answer be desired for the objections of those few men who still believe in the importance of meteorological, constitutional or other autogenetic conditions in the causation of childbed fever, than the fact that we have now confined more than 1000 consecutive cases under the care of students, in the vilest hovels of the city, surrounded by filth of every description, and with the insufficient nourishment and discomforts under which this class of a city population sustains life, and this at all seasons and during the varied climatic conditions of a two years' period; and that under all these disadvantages, mere attention to the surgical cleanliness of the patient's genitals and the attendant's fingers has apparently been the chief factor in reducing the mortality from all causes to less than 0.1%.

